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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------|------------------|
| 10/821,658 | 04/08/2004 | Eric B. Norman | 014939-002500 | 8774 |
| 20350 | 7590 | 03/28/2005 | EXAMINER | |
| TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 | | | PALABRICA, RICARDO J | |
| | | ART UNIT | PAPER NUMBER | |
| | | 3641 | | |

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | | |
|-----------------------|----------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/821,658 | NORMAN ET AL. |
| | Examiner Rick Palabrica | Art Unit 3641 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) ____ is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) 1-60 are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-29, drawn to a **process** (detecting special nuclear materials), classified in class 376, subclass 154.
 - II. Claims 30-60, drawn to an **apparatus** (special nuclear material detector), classified in class 376, subclass 156.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another materially different apparatus, e.g., where emitted fission neutrons instead of gamma rays are detected. Alternatively, the apparatus as claimed can be used to practice another and materially different process, e.g., for detecting explosive materials instead of special nuclear materials.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

2. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- A: Wherein the irradiating beam comprises neutrons (e.g. see claims 2 and 31).
- B: Wherein the irradiating beam comprises gamma rays (e.g. see claims 5 and 34).

3. If embodiment A is elected, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- C: Wherein the neutrons are produced by deuterium (e.g. see claims 3 and 32).

Art Unit: 3641

- D: Wherein the neutrons are produced by tritium (e.g. see claims 4 and 33).

4. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- E: Wherein the gamma rays have a half-life shorter than approximately 1 minute (e.g. see claims 7 and 36).
- F: Wherein the gamma rays have a half-life shorter than approximately 30 seconds (e.g. see claims 8 and 37).

5. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- G: Wherein the gamma rays have an energy higher than approximately 3 MeV (e.g. see claims 9 and 38).
- H: Wherein the gamma rays have an energy higher than approximately 4 MeV (e.g. see claims 10 and 39).

6. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits

to which the claims shall be restricted if no generic claim is finally held to be allowable.

Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- I: Wherein the detector comprises a germanium detector (e.g. see claims 11 and 40).
- J: Wherein the detector comprises a liquid scintillation detector (e.g. see claims 12 and 41).
- K: Wherein the detector comprises a plastic scintillation detector (e.g. see claims 13 and 42).

7. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- L: Wherein the detector detects gamma rays after a time period after cessation of irradiation (e.g. see claims 14 and 43).
- M: Wherein the detector detects gamma rays for a time period after cessation of irradiation (e.g. see claims 15 and 44).

8. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- N: Wherein the gamma ray energy characteristics comprise an energy spectrum (e.g. see claims 17 and 46).
- O: Wherein the gamma ray energy characteristics comprise a measure of time dependence yield (e.g. see claims 19 and 48).

9. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- P: Wherein the energy threshold value is approximately 3 MeV (e.g. see claims 23 and 52).
- Q: Wherein the energy threshold value is approximately 4 MeV (e.g. see claims 24 and 53).

10. Upon election of either invention I or II above, Applicant is required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Currently, claim 1 is generic to Group I and claim 59 is generic to Group II.

- R: Wherein the half-life threshold value is approximately 20 seconds (e.g. see claims 26 and 55).
- S: Wherein the half-life threshold value is approximately between 20 and 30 seconds (e.g. see 27 and 56).

11. Applicant is advised that a reply to the species requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Art Unit: 3641

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrida whose telephone number is 703-306-5756. The examiner can normally be reached on 6:30-5:00, Mon-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJP
March 21, 2005

A handwritten signature in black ink, appearing to read "R Palabrida".